

EXHIBIT U

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**IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA

Related to CASE NO. 3:21-cv-07559-WHA

**OPENING EXPERT REPORT OF SAMRAT BHATTACHARJEE REGARDING
INVALIDITY OF CLAIM 13 OF U.S. PATENT NO. 9,967,615 AND OTHER ISSUES**

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running on a given platform/operating system (OS).” ’615 Patent at 17:7-10. But the specification does not describe how the “local playback system” allows these controls, let alone whether any transport controls and the control device are modified as a result of transferring playback to a playback device. The specification also does not disclose stopping playback on the control device.

XI. NON-INFRINGEMENTALTERNATIVES

583. As I will explain (in what I expect will be my forthcoming report on non-infringement), Google’s products do not infringe the ’615 patent. It is thus my opinion that the accused Google products are themselves non-infringing alternatives to claim 13 of the ’615 patent.

584. Additionally, I understand that Sonos contends that for Claim 13 of the ’615 the date of first infringement in this case is May 8, 2018, the date on which the ’615 patent issued. Based on my current understanding of Sonos’s infringement contentions and my review of the evidence in this case, including documents, deposition testimony and source code, it is my opinion that several additional non-infringing alternatives were available at the time of the alleged first infringement (and are still available today).

585. I discuss some of these non-infringing alternatives below. I reserve the right to update, amend, or supplement my opinions based on further evidence offered by the parties or located based on my investigation, opinions proffered by Sonos’s experts, or arguments raised by counsel.

A. Non-Infringing Alternative #1 - One Set of Cloud Servers

586. In this section, I describe Alternative #1, an implementation in which URLs and content are served from the same server. Alternative #1 is a non-infringing alternative for the Accused Instrumentalities to the alleged invention claimed in Claim 13 of the ’615 patent.

587. Claim 13 includes limitations that require that the playback device receive resource locators from a “first set of cloud servers” and multimedia content from a second set of “second

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cloud servers,” for example: “adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service.” Consistent with this claim language, during prosecution of the application that issued as the ’615 patent, the applicant also argued that the claimed first set of cloud servers are distinct from the claimed second set of cloud servers. For example, the Examiner rejected what issued as the asserted claims in a May 9, 2017 Office Action based on the prior art reference Togashi in view of Roberts in view of Zott. *See* 5-9-2017 OA. In response to this rejection, Applicant distinguished Togashi and explained that its invention “splits functionality between two set of servers,” the first set of cloud servers and the second set of cloud servers. *See* 8-28-2017 Applicant’s Arguments and Remarks at 4-6. Accordingly, the claims require that the first set of cloud servers that send the resource locators be different from the second cloud servers that provide the multimedia content.

588. I understand that Sonos alleges that the accused YouTube products receive a “resource locator” from a first set of cloud servers (a WatchNext service or Player Service) and multimedia content from a second set of cloud servers (a Bandid service). In Alternative #1, the resource locators and content would be obtained from the same set of cloud servers (the Bandid service), and thus Alternative #1 would not meet the claim limitations requiring a “first set of cloud servers” and a “second set of cloud servers.”

589. More specifically, I understand that Sonos has alleged that in the YouTube system a receiver device (i.e., the alleged playback device) receives (1) one or more resource locators from a first set of cloud servers by receiving a WatchNext message, or streaming URL from the Player service, and (2) multimedia content from a second set of cloud servers, namely a Bandid service.

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Similarly, I understand that Sonos has alleged that the GPM system receives (1) one or more resource locators from a first set of cloud servers by receiving an itemWindow message, and (2) multimedia content from a second set of cloud servers, namely the Bandid service. In Alternative #1, the receiver device would retrieve the alleged resource locators and multimedia content from a single set of cloud servers that consolidates the accused functionality above-rather than from a first set of cloud servers and a separate second set of cloud servers.

590. Alternative #1 would have been an available option for Google to implement at the time of the alleged first infringement and would take little engineering time and cost to implement. In fact, while GPM has been discontinued and is thus no longer in service, I understand that the accused YouTube applications have already implemented Alternative #1 in the non-casting use case.⁷⁵ See also GOOG-SONOSNDCA-00073431 (“Main app – Launched”, “Music app – Coming soon, user-facing experiment in progress as of 2020Q1,” “iOS – Launched,” “HTML5 – Coming soon, implementation in progress as of 2019 Q4”). Specifically, Google has implemented its “Onesie” platform in which after receiving a setPlaylist message a YouTube receiver sends a single request to a Onesie Agent to obtain both the alleged “resource locators” and multimedia content. And although I understand that Onesie has not yet been implemented for casting, I understand that Google anticipates that it will be released for the casting use case by the end of the year.⁷⁶

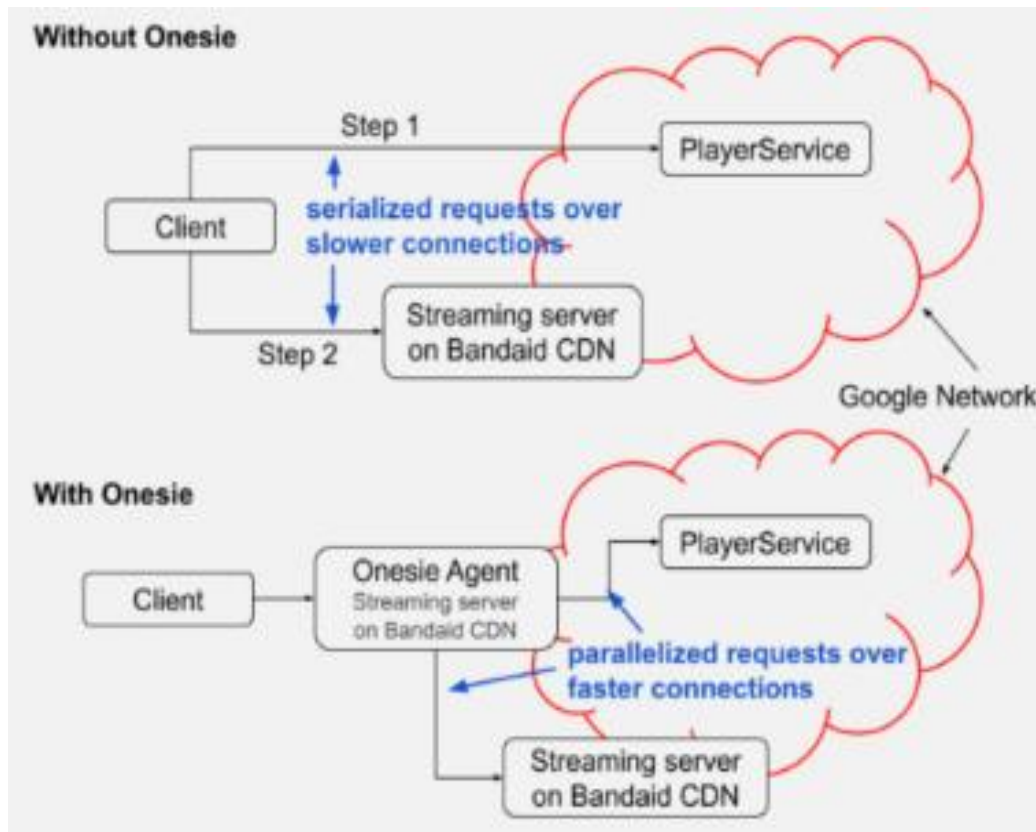
591. The image below shows the “Without Onesie” implementation that Sonos has accused, in which the YouTube receiver (labeled “client”) receives resource locators from a Player Service and multimedia content from a separate Bandid service, as well as the “With Onesie”

⁷⁵ Conversation with Pawel Jurzyk.

⁷⁶ Conversation with Pawel Jurzyk.

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implementation that is Alternative #1 in which these two previously separate functionalities are now provided by the Onesie agent of the Bandaaid service:



GOOG-SONOSNDCA-00073429 (Onesie). “With Onesie, the client sends a single request to Bandaaid to get both media data and a PlayerService response interleaved in a single HTTP response body. This is faster than the pre-Onesie request flow where a PlayerService request needs to be completed before media fetches can start.” *Id.*; GOOG-SONOSNDCA-00073494 (“Before we had Onesie, the client would send a request to the PlayerService to get the playback authorized, and then fetch the media header and contents from Bandaaid. It took a couple of network round trips to various servers to complete the two steps. This slowed down playback startup. Onesie consolidates all these requests into a single request sent to a Onesie “agent” running on a Bandaaid machine. This agent talks to various servers in Prod and within Bandaaid, gathers all the data that’s

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needed, and streams them to the client in one single HTTP response.”); GOOG-SONOSNDCA-00073577 (“Client Onesie Request: A client Onesie request is used by the client to fetch both a Player response and media data from Bandid.”).

592. I understand that Google is also working on a feature called Streaming Watch, which would further allow the Onesie agent to provide the information in a WatchNext response: “The idea here is that clients make a single request to Onesie. Onesie will then make the GetPlayer and GetWatchNext RPCs. Onesie can then stream back to the client the GetPlayer response ahead of the GetWatchNext response via chunked HTTP.” GOOG-SONOSNDCA-00071671; *see also* GOOG-SONOSNDCA-00070863 (“streaming Watch is a project to merge GetPlayer and GetWatchNext into a single streaming RPC (aka GetWatch)”). In short, with Onesie the accused products would not satisfy Claim 13’s requirement that there be a first set of cloud servers that provide resource locators and a second set of cloud servers that provide multimedia content—both “resource locators” and “multimedia content” would be provided by a single set of cloud servers (Bandid servers).

593. In my opinion, end users would have found Alternative #1 to be an acceptable alternative. While the resource locators and multimedia content would be retrieved from a single set of cloud servers (Bandid servers), an end user’s experience would remain the same. In fact, the Onesie implementation would improve an end user’s experience by reducing playback latency and eliminating the need for the receiver device to make two parallel requests to different sets of cloud servers (as opposed to a single request to a Onesie Agent). *See* GOOG-SONOSNDCA-00073429 (“Overall Onesie reduced median playback latency by more than 600ms on Android (30%+ reduction). Similar effect was observed when Onesie was adopted on iOS.”); GOOG-SONOSNDCA-00073431 (“There was also a .25% watch time improvement”).

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667. I reserve the right to modify or supplement my opinions, as well as the basis for my opinions, in light of new positions set forth by Sonos, to the extent Sonos is permitted to advance those positions. This includes positions concerning the scope and interpretation of the asserted claims, infringement allegations, conception, diligence, and reduction to practice, and secondary considerations. It is also my understanding that Sonos may submit an expert report corresponding to this report. I reserve the right to rebut any positions taken in that report.

I, Samrat Bhattacharjee, declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

DATED: June 22, 2022



Samrat Bhattacharjee